

CLAIMS

1. A method for estimating the location of a mobile unit in a cellular radio system, said system comprising elongate cells and non-elongate cells, and said method comprising:

Identifying a cell of the system in which the mobile unit is located;

determining whether the cell is elongate or non-elongate;

determining the location of the base-station;

if the cell is non-elongate, estimating the location of the mobile unit to be the location of the base station of the cell; or

if the cell is elongate, estimating the distance of the mobile unit from the base-station of the cell, determining bearing information associated with the cell, the bearing information defining a direction, and estimating the location of the mobile unit by calculating a location offset from the base-station by the said distance in the said direction.

2. A method as claimed in claim 1, wherein the bearing information is independent of the location of the mobile unit within the cell.

3. A method as claimed in claim 1 or 2, wherein the distance of the mobile unit from the base-station is estimated by means of synchronisation information of the cellular radio system.

4. A method as claimed in claim 3, wherein the synchronisation information represents a timing offset between the mobile station and the base-station.

5. A method as claimed in any preceding claim, comprising the step of sending a message to the mobile station in dependence on the estimated location.

6. A method as claimed in any preceding claim, comprising the step of receiving a message from the mobile requesting estimation of its location.

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7. A method as claimed in any preceding claim, comprising the steps of receiving information defining a location; and calculating a route between that location and the estimated location of the mobile station.

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8. A locating unit for estimating the location of a mobile unit in a cellular radio system, the unit being connected to the cellular radio system for reception of information identifying a cell of the system in which the mobile unit is located and information indicative of the distance of the mobile unit from the base-station of the cell, said system comprising elongate and non-elongate cells, said locating unit comprising:

data storage means storing the location of the base-station and, if the cell is elongate, bearing information associated with the cell, the bearing information defining a direction; and

location calculation means for, if the said cell is non-elongate, calculating the location of the base-station as an estimate of the location the mobile unit, and if the said cell is elongate, calculating the distance of the mobile unit from the base-station of the cell and calculating a location offset from the base-station by the said distance in the said direction as an estimate of the location of the mobile unit.

9. A unit as claimed in claim 8, comprising messaging means for generating a message in dependence on the estimated location for transmission to the mobile unit.

10. A locating unit for reporting the location of a mobile unit in a cellular radio system, the unit being connected to the cellular radio system for reception of information identifying a cell of the system in which the mobile unit is located and information indicative of the distance of the mobile unit from the base-station of the cell, the locating unit comprising:

data storage means storing descriptive information associated with one or more possible distances of a mobile unit from the base-station of the cell; and

location reporting means for generating a report on the location of the mobile unit based on the descriptive information that corresponds to the distance of the mobile unit from the base-station of the cell.

11. A unit as claimed in claim 10, wherein the descriptive information comprises place name information.

12. A unit as claimed in claim 10 or 11, wherein the descriptive information comprises road name information.

13. A unit as claimed in any of claims 10 to 12, wherein the location reporting means comprises a wireless application protocol server.

14. A unit as claimed in claim 13, wherein the location reporting means comprises means for accepting a request for information on the location of the said mobile unit from a second mobile unit from a second mobile unit.

15. A unit as claimed in claim 14, wherein the said request is made by means of the wireless application protocol.

16. Locating apparatus for reporting the location of a mobile unit in a mobile telecommunication system including positioning means for determining the geographic location of a mobile unit in response to a request including information identifying that mobile unit, the locating apparatus comprising:

location request means for requesting the geographic location of a mobile station from the positioning means;

geographic location translation means for receiving the geographic location of the mobile unit from the positioning means and translating the said geographic location into descriptive information; and

location response means for generating a response message comprising the said descriptive information.

17. Locating apparatus as claimed in claim 16, wherein the locating apparatus is capable of providing a content service to respond with the said descriptive information.

18. Locating apparatus as claimed in claim 17, wherein the said service is a wireless application protocol service.

19. Locating apparatus as claimed in any of claims 16 to 18, wherein the said positioning means is a mobile location centre.

20. A method for providing a report on the location of a first mobile station, the method comprising:

a second mobile station transmitting a request for information on the location of the first mobile station;

estimating the location of the first mobile station;

generating a report on the location of the first mobile station; and

transmitting that report to the second mobile station;

wherein the request and/or the report are transmitted by means of the wireless application protocol.

21. A method as claimed in claim 20, wherein the report is generated by a wireless application protocol server.

22. A method as claimed in claim 20 or 21, wherein the said request is made to a gateway mobile location centre by way of a WTA server.

23. A method as claimed in any of claims 20 to 22, wherein the said report is generated based on information from a gateway mobile location centre and from a location information server.